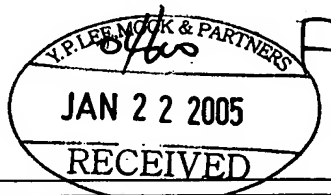


PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING

To:
LEE, Young-Pil

The Chunghwa Building, 1571-18 Seocho-dong, Seocho-gu,
Seoul 137-874, Republic of Korea



PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing
(day/month/year) 18 JANUARY 2005 (18.01.2005)

Applicant's or agent's file reference
YB-21216-PCT

REPLY DUE within 1 months from
the above date of mailing

International application No.

PCT/KR2003/002785

International filing date (day/month/year)

19 DECEMBER 2003 (19.12.2003)

Priority date(day/month/year)

21 DECEMBER 2002 (21.12.2002)

International Patent Classification (IPC) or both national classification and IPC

IPC7 C07D 215/48

Applicant

YUHAN CORPORATION et al

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When ? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d)

How ? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3
For the form and the language of the amendments, see Rules 66.8 and 66.9

Also For an additional opportunity to submit amendments, see Rule 66.4
For an examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis
For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 11 APRIL 2005 (11.04.2005)

Name and mailing address of the IPEA/KR



Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

LEE, Mi Jeong

Telephone No. 82-42-481-5601



WRITTEN OPINION

International application No.

PCT/KR2003/002785

I. Basis of the opinion

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement) under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet/fig _____

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

WRITTEN OPINION

International application No.

PCT/KR2003/002785

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 9	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1 - 9	NO
Industrial applicability (IA)	Claims	1 - 9	YES
	Claims		NO

2. Citations and explanations

국제조사 보고서의 인용문헌을 다음과 같이 정의함.

D1: US 4599334 A (1986. 7. 8.)

D2: US 5869661 A (1999. 2. 9.)

1. 신규성 [PCT Article 33(2)]

청구항 제1-9항은 화학식(II) 화합물과 K₃PO₄를 반응시켜 화학식(1) 화합물을 제조하는 방법을 청구하고 있는 바, D1 column 5에 화학식(6) 화합물로부터 화학식(7) 화합물을 제조하는 방법이 기재되어 있고, D2 column 5에 폐환 반응을 통해 화학식(1') 화합물을 제조하는 방법이 기재되어 있으나 D1은 K₃PO₄를 사용한다는 것이 구체적으로 기재되어 있지 않은 점에서 본원발명과 차이를 보이고, D2는 반응하는 화합물의 치환기가 F가 아니라 -OMe 등이라는 점에서 본원발명과 차이를 보이므로 신규성은 인정됩니다.

2. 진보성 [PCT Article 33(3)]

그러나 D1에서 acid-binding agent로 반응에 사용된 butyllithium, potassium carbonate 등을 K₃PO₄로 치환하여 사용하는 정도 및 D2에서의 반응 화합물의 치환기의 차이 정도는 당업자가 용이하게 예상할 수 있는 정도의 것으로 인정되므로 본원발명은 D1 및 D2에 대한 진보성이 인정되지 않습니다.